

1 REMARKS:

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3
4 Claim 3 (Third Amendment) has been amended by the
5 addition of the following language to Claim 3 as previously
6 amended: "through which said hydrocarbons flow". Claim 6
7 (Third Amendment) has been similarly amended.
8

9
10 Claim Rejections - 35 USC § 103
11 Claims 3 and 6 (Third Amendment)

12
13 Item No. 1 of the 9/8/2006 Office Action states in part:
14 "Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being
15 anticipated by Coates 6,615,848 alone."
16

17 Element 50 in Coates is the "conduit" (column 5, line
18 22). The "conduit" in Coates corresponds to the flowline in
19 Claim 3 of the instant invention. Element 70 in Coates is
20 the "tubing string" (column 5, line 21). Coates only
21 describes making the tubing string possibly neutrally
22 buoyant. Importantly, Coates does not describe making the
23 "conduit" neutrally buoyant by the introduction of the
24 "tubing string". However, applicant's invention in Claim 3
25 does describe making the flowline itself neutrally buoyant.
26 Importantly, Coates does not describe making the assembly of
27 the "conduit" and of the "tubing string" to be neutrally
28 buoyant under any circumstances. For these reasons alone,
29 applicant submits that Claim 3 (Third Amendment) is allowable
30 over Coates.
31

32 The 9/8/2006 Office Action states in part: "As concerns
33 claim 3, Coates shows a flowline for producing hydrocarbons

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1 from a subsea well that is comprised of a substantially
2 neutrally buoyant tubular composite umbilical means (figures
3 1-2)....". Applicant wishes to respectively point out that
4 the "tubing string" is not a flowline and it is not used to
5 conduct hydrocarbons through it during production. Put
6 another way, the "tubing string" in Coates is not intended to
7 be a flowline through which hydrocarbons are intended to flow
8 from the subsea well to the surface during normal production
9 operations. For this reason alone, applicant respectfully
10 submits that Claim 3 (Third Amendment) is allowable over
11 Coates.

12
13 Further, the "tubing string" 70 in Coates is not used to
14 produce hydrocarbons. Instead, the "tubing string" in Coates
15 is used to clean out the interior of the "conduit" 50. Put
16 another way, the tubing string in Coates is a major portion of
17 a working device, or work tool, temporarily placed within the
18 "conduit" or within the flowline to clean it out. The
19 temporarily placed work tool is removed before normal
20 production resumes. Put in terms of the instant invention,
21 if the flowline of Claim 3 (Third Amendment) were to become
22 hypothetically obstructed for one reason or another, then the
23 invention described in Coates could be used to clean out the
24 flowline - but the invention in Coates would be removed
25 before production flow through the flowline resumed.
26 However, one advantage of the applicant's invention in
27 Claim 3 (Third Amendment) is that the flowline itself is
28 intrinsically constructed to minimize the probability of
29 having to introduce a device such as shown in Coates to clean
30 it out. So, applicant's invention reduces the cost and
31 complexity to keep open subsea flowlines by preventing the
32 build-up of the waxes and hydrates to begin with.
33

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1 The 9/8/2006 Office Action further states: "Therefore,
2 it would have been obvious to one of ordinary skill in the
3 art at the time the invention was made to modify Coates to
4 anchor the flowline over canyons to overcome varying subsea
5 conditions, thus improving the versatility of the flowline."
6 Applicant respectfully wishes to point out that (A) Coates
7 never teaches making a neutrally buoyant flowline through
8 which hydrocarbons are intended to flow during actual
9 production operations. Nor (B) does Coates teach attaching
10 any such flowline in a manner to overcome varying subsea
11 conditions. Accordingly, the 9/8/2006 Office action requires
12 two independent "obviousness" type steps used in combination
13 for the rejection which applicant submits is very
14 unreasonable - particularly in such a crowded art.
15 Accordingly, applicant submits that Claim 3 (Third Amendment)
16 is allowable over Coates for these reasons alone.

17
18 Applicant wishes to respectfully point out that Coats is
19 an invention directed solely at "An apparatus for removing
20 material from a conduit..." (lines 1 and 2 of Claim 1); and
21 "A tool for removing deposits from the inside diameter of a
22 conduit, the tool comprising..." (lines 1 and 2 of Claim 16);
23 and "A method of monitoring and cleaning a conduit inner
24 diameter with deposits..." (lines 1 and 2 of Claim 22). The
25 only independent claims in Coats are Claims 1, 16, and 22.
26 Applicant wishes to respectfully point out that the invention
27 described in Coats is not a flowline itself, but instead, is
28 a device to clean out an existing flowline. In Coats, the
29 tubular attached to the "cleaning and monitoring tool
30 attached to its end" (Coats, Abstract) is inserted within a
31 flowline, but the combination of those two elements in Coats
32 would not make an assembled entire flowline that is
33 substantially neutrally buoyant as taught in applicant's

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1 invention. Further, although Coats does describe using "a
2 nearly neutrally buoyant or substantially buoyant..." "tubing
3 string" attached to the cleaning tool, Coats does not
4 describe using such "tubing string" as a flowline itself.
5 Therefore, applicant's invention solves a different problem
6 than Coats, and such different problem is recited in
7 applicant's Claim 3 (Third Amendment). Further, Coats lacks
8 any suggestion that its teachings should be modified in a
9 manner required to meet applicant's Claim 3 (Third
10 Amendment).

11
12 This is an important invention that is needed now in the
13 oil industry. Spanning a subsea canyon with a steel flowline
14 subjects that flowline to large stresses and such a steel
15 flowline is subject to failure. Spanning a subsea canyon
16 with a portion of a neutrally buoyant tubular composite
17 umbilical provides an alternative that is less subject to
18 failure, is cheaper to install, and is faster to install.
19 So, applicant's invention is better, cheaper, and faster to
20 install. Accordingly, applicant respectfully submits that
21 Claim 3 (Third Amendment) is allowable over Coats. This same
22 reasoning also applies to Claims 1, 2, 4, and 5 as previously
23 amended, and which are discussed below, but this logic will
24 not be repeated further in detail in the interests of brevity
25 and in the interests of saving Examiner's time. This same
26 logical argument applies to both neutrally buoyant tubular
27 composite umbilicals and to positively buoyant tubular
28 composite umbilicals that are used to span subsea canyons.
29 This general argument will be referenced below as applicant's
30 invention being "better, cheaper, and faster to install."

31
32 There are other reasons that Claim 3 (Third Amendment) is
33 allowable over Coats. The results achieved by the invention

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1 are new, unexpected, superior, and surprising. The invention
2 is classified in a crowded art, and therefore, a small step
3 forward should be regarded as significant. The prior art
4 lacks any suggestion that the reference should be modified in
5 a manner required to meet the claims. Up to now, those
6 skilled in the art never appreciated the advantage of the
7 invention. If the invention were in fact obvious, because of
8 its advantages, those skilled in the art surely would have
9 implemented it by now. That is - the fact that those skilled
10 in the art have not implemented the invention, despite its
11 great advantages, indicates that it is not obvious. The
12 invention solves a long-felt, long-existing, but unsolved
13 need. The invention is contrary to the teachings of the
14 prior art - that is , the invention goes against the grain of
15 what the prior art teaches. The invention uses a new
16 principle of operation, and applicant has blazed a new trail,
17 rather than followed one. Applicant's invention solves a
18 different problem than the reference, and such different
19 problem is recited in the claims. For future reference, the
20 above cited reasons are defined herein as the "First Set of
21 Reasons" showing that Claim 3 (Third Amendment) is allowable
22 over Coats.

23
24 Almost all of the same comments above apply to Claim
25 6 (Third Amendment). Briefly, with regards to Claim 6 (Third
26 Amendment), Coats does not describe a flowline for producing
27 hydrocarbons from a subsea well that is comprised of a
28 substantially neutrally buoyant tubular composite umbilical
29 means through which hydrocarbons are intended to flow from
30 the subsea well to the surface. Further, Coats does not
31 describe anchoring the substantially neutrally buoyant
32 tubular composite umbilical means to the sea bottom at a
33 first location on a first side of said canyon and anchoring

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1 it to the sea bottom at a second location on a second side of
2 said canyon, whereby the first and second locations are on
3 opposite sides of said canyon, and whereby a portion of the
4 neutrally buoyant tubular composite umbilical between the
5 first and second locations passes over the canyon in ocean
6 bottom. As discussed above, the 9/8/2006 Office Action
7 rejection requires two independent "obviousness" type steps
8 ("A" and "B") which applicant submits is very unreasonable -
9 particularly in such a crowded art. Accordingly, applicant
10 submits that Claim 6 (Third Amendment) is allowable over
11 Coates for these reasons alone and for the additional reasons
12 cited above in relation to Claim 3 (Third Amendment).
13 Accordingly, applicant respectfully submits that
14 Claim 6 (Twice Amended) is allowable over Coats.

15
16 Therefore, applicant has addressed all the issues in the
17 9/8/2006 Office Action related to these particular claims,
18 and therefore applicant respectfully submits that
19 Claim 3 (Twice Amended) and Claim 6 (Twice Amended) are in a
20 condition for allowability.

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22
23 Claim Rejections - 35 USC § 103
24 Claims 1, 2, 4, and 5
25

26 As a minor point, Item 2 of the 9/8/2006 Office Action
27 states on page 3, lines 2-3: "Costa Filho shows a flowline
28 for producing hydrocarbons from a subsea well that is
29 comprised of tubular 78....". Applicant has not been able to
30 identify element 78 in Costa Filho, although applicant
31 assumes this is element 13.

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1 Item No. 2 of the 9/8/2006 Office Action states in part:
2 Claims 1, 2, 4, and 5 are rejected under 35 U.S.C. 103(a) as
3 being unpatentable over Costa Filho 5,289,561 in view of
4 Quigley et al 6,663,453." The Office Action further states:
5 "Costa Filho does not show a substantially neutrally buoyant
6 flow line (that) is substantially neutrally buoyant in the
7 sea water adjacent to the subsea well; however, Quigley shows
8 a similar flowline (fig 12) for producing hydrocarbons (from)
9 a subsea well including buoyancy means that allows for
10 neutral or positive buoyancy (col. 1, lines 1-17).
11 Therefore, it would have been obvious to one of ordinary
12 skill in the art at the time the invention was made to modify
13 Costa Filho as taught by Quigley, to include buoyancy to
14 prevent damage to the flowline by its weight (having to be
15 thicker the deeper the flowline) at greater depths while
16 maintaining flow performance." The 9/8/2006 Office Action
17 further states: "The buoyant flowline of the combination is
18 capable of being anchored on either ends of a canyon.
19 Therefore, it would have been obvious to one of ordinary
20 skill in the art at the time the invention was made to modify
21 the combination above to anchor the flowline over canyons to
22 overcome varying subsea conditions thus improving the
23 versatility of the flowline."

24
25 Applicant respectfully submits that the above complex
26 arguments present many independent steps that must be
27 combined in an unreasonable fashion to anticipate applicant's
28 invention.

29
30 First, the 9/8/2006 Office Action states that "Costa
31 Filho does not show a substantially neutrally buoyant flow
32 line (that) is substantially neutrally buoyant in the sea
33 water adjacent to the subsea well." Costa Filho never

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1 disclosed any method or apparatus to make his system
2 neutrally buoyant. Nor did Costa Filho disclose any method
3 or apparatus for spanning canyons in the ocean bottom nor the
4 advantage of neutral buoyancy to such methods and apparatus.

5
6 It would not have been obvious to one of ordinary skill
7 in the art to combine Costa Filho and Quigley to make a
8 substantially neutrally buoyant apparatus and then in
9 addition, to use that apparatus for an entirely different
10 purpose of spanning canyons in seabottoms - a topic that was
11 not addressed by either Costa Filho or Quigley. Accordingly,
12 applicant submits that the 9/8/2006 Office Action uses an
13 awkward and unreasonable combination to solve a problem that
14 was not addressed by either reference.

15
16 With respect to Claim 1 (Previously Amended), neither
17 Costa Filho nor Quigley, nor their combination, teach or
18 suggest a flowline for producing hydrocarbons from a subsea
19 well that is comprised of a substantially neutrally buoyant
20 tubular composite umbilical means which passes over a canyon
21 in the ocean bottom. Further, neither Costa Filho nor
22 Quigley, nor their combination, teach or suggest using a
23 substantially neutrally buoyant tubular composite umbilical
24 means that is anchored to the sea bottom at a first location
25 on a first side of the canyon and is anchored to the sea
26 bottom at a second location on a second side of the canyon,
27 whereby the first and second locations are on opposite sides
28 of the canyon, and whereby a portion of the neutrally buoyant
29 tubular composite umbilical between the first and second
30 locations passes over the canyon in the ocean bottom.
31 Accordingly, applicant respectfully submits that Claim
32 1 (Previously Amended) is allowable over Costa Filho in view
33 of Quigley.

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1 There are other reasons that Claim 1(Previously Amended)
2 is allowable over Costa Filho in view of Quigley. The
3 prior-art references do not contain any suggestion (express
4 or implied) that they be combined, or that they be combined
5 in the manner suggested by Claim 1(Previously Amended). The
6 references take mutually exclusive paths and reach different
7 solutions to several different problems. Since they teach
8 away from each other, it would not be logical to combine
9 them. The references themselves teach away (expressly or by
10 implication) from the suggested combination. If they could
11 be literally combined, the references would produce an
12 inoperative literal combination. It would be necessary to
13 make more modifications, not taught in the prior art, in
14 order to combine the references in the manner suggested by
15 Claim 1(Previously Amended). Even if combined, the
16 references would not meet the invention as defined in
17 Claim 1(Previously Amended). The combination suggested
18 requires a series of separate, awkward combinative steps that
19 are too involved to be considered obvious. For these
20 reasons, applicant submits that Claim 1(Previously Amended)
21 is allowable over Costa Filho in view of Quigley. These
22 reasons in this paragraph are defined herein as the "Second
23 Set of Reasons". Further, applicant submits that the
24 invention in Claim 1(Previously Amended) is better, cheaper
25 and faster to install as described above.

26
27 Very similar arguments could be submitted one by one
28 herein for the amended language added to Claim 2(Previously
29 Amended), Claim 4 (Previously Amended), and Claim
30 5(Previously Amended), but in the spirit of brevity, and to
31 save Examiner's valuable time, those arguments will not be
32 repeated based on the quotes of the added language to each
33 and every one of those amended claims herein. The Second Set

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1 of Reasons also applies to each of those Claims. Further,
2 applicant submits that the invention as described in
3 Claim 2 (Previously Amended), Claim 4 (Previously Amended), and
4 Claim 5 (Previously Amended) is better, cheaper and faster to
5 install as described above.

6
7 Therefore, applicant has addressed all the issues in the
8 9/8/2006 Office Action related to these claims, and therefore
9 applicant respectfully submits that Claim 1 (Previously
10 Amended), Claim 2 (Previously Amended), Claim 4 (Previously
11 Amended), and Claim 5 (Previously Amended) are in a condition
12 of allowability over Costa Filho in view of Quigley.

13
14
15 Summary

16
17 In accordance with the above, applicant has responded in
18 detail to every single point in the 9/8/2006 Office Action.
19 Therefore, applicant respectfully submits that Claims 1-6 are
20 in a condition for allowability.

21
22 Thank you.

23
24
25 PAYMENT OF FEES:

26
27 All fees are to be paid from Applicant's Account
28 No. 50-0499. To applicant's best knowledge, only the amount
29 of \$60.00 is required for the one-month extension.

30
31 If the applicant has made a mistake on the payment of
32 any fees herein, applicant requests that any such
33 deficiencies be billed to Account No. 50-0499 that was

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1 established on 3/20/1998. Fees on patents and patent
2 applications entirely owned, or owned in part, by William
3 Banning Vail III may be made from this account. William
4 Banning Vail III is doing business as an inventor under the
5 name of "Vail's Inventions". Marilyn L. Vail, the wife of
6 William Banning Vail III, may also direct that fees be paid
7 from this Account No. 50-0499. If for unforeseen reasons
8 funds are not available in that account, please let applicant
9 know as soon as possible and said deficiencies will be paid
10 immediately. In the event of overpayment of any fees herein,
11 applicant respectfully requests that any overpayment be
12 deposited into Account No. 50-0499.

13
14
15 Pro-Se Case

16
17 This case herein is a pro-se case. Therefore, in the
18 event that the USPTO objects to any, or all of the claims
19 herein, applicant respectfully requests assistance from the
20 Examiner under MPEP Section 707.07(j) to draft an acceptable
21 claim based upon the disclosure and language in the
22 application.

23
24 Further, in the event that the Examiner rejects the
25 claims, applicant requests that Examiner direct applicant
26 to the claims closest to allowability, and if possible,
27 applicant further requests that Examiner preliminarily
28 mark-up one of said claims in a future office action to
29 further aid applicant to achieve allowability of at least
30 one claim in an expeditious fashion.

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1 DECLARATION:

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3 As applicant, I hereby verify that all statements made
4 herein of my own knowledge are true and that all statements
5 made on my information and belief are believed to be true;
6 and further that these statements were made with the
7 knowledge that willful false statements and the like so made
8 are punishable by fine or imprisonment, or both, under
9 Section 1001 of Title 18 of the United States Code and that
10 such wilful false statements may jeopardize the validity of
11 the application or any patent issuing thereon.

12

13 This application is filed pro-se. The applicant is
14 using the book entitled "Patent It Yourself", Eleventh
15 Edition, by David Pressman, and if there are errors, please
16 advise the co-inventor, and such errors will be corrected
17 immediately. Applicant has used certain arguments presented
18 in that book herein.

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1 Please address all correspondence involving this case to
2 the co-inventor at the below defined address. Thank you.

3
4 Very respectfully submitted,

5
6
7 

JAN. 8, 2007

Date

8 William Banning Vail III

9 Second Named Inventor and

10 President of Smart Drilling and Completion, Inc.

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31 (Note: This is the signature page of the document entitled
32 "RESPONSE TO OFFICE ACTION MAILED 9/8/2006 AND AMENDMENT"
33 for Serial No. 10/800,443.)

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